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35884	7590	11/18/2009		
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ART UNIT		PAPER NUMBER		
2617				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/552,484

**Applicant(s)**

KYUNG ET AL.

**Examiner**

ARIEL BALAOING

**Art Unit**

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 42-47, 50-58, 79, 80 and 87-90 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 42-47, 50-58, 79, 80 and 87-90 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/14/2009 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 42-47, 52-58, 79, 89, 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over NEEDHAM et al (US 6,188,767) in view of LALWANEY (US 2004/0037237) and further in view of 3GPP2 "Upper Layer (Layer 3) Signaling for cdma2000 Spread Spectrum Systems" 3GPP2 C.S0005-d version 1.0 (see IDS submission 04/27/2009, hereinafter 3GPP2).

Regarding claim 42, NEEDHAM discloses a method of receiving a broadcast/multicast service [group call] via a plurality of forward broadcast supplemental channels [forward links] of a mobile communication system (abstract), the method comprising steps of: receiving a flow identifier [talk group identifier]

indicative of the broadcast/multicast service (Figure 6; col. 4, line 44-47; group call request); generating a public long code mask, using the received flow identifier and a predetermined portion of a channel identifier [Walsh code] for identifying a corresponding forward broadcast supplemental channel among the plurality of forward broadcast supplemental channels (Figures 3 and 4; col. 3, line 55-67; col. 4, line 57-col. 5, line 5; long code mask based on talkgroup identifier used to determine long code and Walsh codes) by: allocating a specific header **401** (col. 3, line 64-67); and arranging the channel identifier and the flow identifier from a least significant bit to a more significant bit, wherein the channel identifier and the flow identifier are arranged in a portion of the public long code mask different from wherein the specific header is allocated (Figure 4; col. 3, line 64-col. 4, line 10; header is located in **401** while channel and flow identifiers are located in **402**). However, NEEDHAM does not expressly disclose wherein allocating a specific header has a value that does not coincide with previous public long code masks and does not coincide with previous long code masks to a most significant bit of the public long code mask. In the same field of endeavor, LALWANEY discloses allocating a specific header has a value that does not coincide with previous public long code masks and does not coincide with previous long code masks to a most significant bit of the public long code mask (paragraph 43, 44; header includes field for specific mapping to long code masks). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify NEEDHAM to include the teachings of LALWANEY, LALWANEY states that since such a modification would provide specific address mapping to specified multicast groups of specific long

code masks. However, the combination of NEEDHAM and LALWANEY does not expressly disclose arranging the channel identifier and the flow identifier from a least significant bit to a more significant bit, respectively. In the same field of endeavor, 3GPP2 teaches arranging the channel identifier and the flow identifier from a least significant bit to a more significant bit, respectively (page 2-669, lines 17-27). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of NEEDHAM and LALWANEY to include the teachings of 3GPP2, since specific allocations of a public long code mask and flow identifier within most significant bits and least significant bits using standardized protocol would allow a system to function within known specifications.

Regarding claim 43, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. NEEDHAM further discloses wherein the generated public long code mask has a length of 42 bits (Figure 4).

Regarding claim 44, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and 3GPP2 further discloses wherein the flow identifier has a length of 32 bits (3GPP2 – page 2-670, line 8).

Regarding claim 45, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and 3GPP2 further discloses wherein the channel identifier includes a maximum of seven bits (3GPP2 – Figure 2.6.13.11-1). Furthermore, It would have been an obvious matter of design choice to provide a channel identifier of 7 bits or less, since such a

modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Regarding claim 46, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and 3GPP2 further discloses wherein the predetermined portion is the four least significant bits of the channel identifier (3GPP2 – Figure 2.6.13.11-1). Furthermore, It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the channel identifier at the four least significant bits, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Regarding claim 47, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and 3GPP2 further discloses wherein the predetermined portion is the three least significant bits of the channel identifier (3GPP2 – Figure 2.6.13.11-1). Furthermore, It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the channel identifier at the four least significant bits, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Regarding claim 52, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and 3GPP2 further discloses wherein the specific header has a length of seven bits,

corresponding to a value (3GPP2 pages 2-10 – 2-11). Although the combination of NEEDHAM, LALWANEY, and 3GPP2 does not expressly detail selection of a specific value, it would have been an obvious matter of design choice to use any header number to indicate characteristics of a the public long code mask since the applicant has not disclosed that a specific header used to indicate a characteristic of the public long code mask solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a header of any chosen value.

Regarding claim 53, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and 3GPP2 further discloses wherein the specific header has a length of six bits, corresponding to a value (3GPP2 pages 2-10 – 2-11). Although the combination of PANCHAL, JANG, and 3GPP2 does not expressly detail selection of a specific value, it would have been an obvious matter of design choice to use any header number to indicate characteristics of a the public long code mask since the applicant has not disclosed that a specific header used to indicate a characteristic of the public long code mask solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a header of any chosen value.

Regarding claim 54, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and 3GPP2 further discloses wherein the specific header has a length of seven bits, corresponding to a value (3GPP2 pages 2-10 – 2-11). Although the combination of NEEDHAM, LALWANEY, and 3GPP2 does not expressly detail selection of a specific

value, it would have been an obvious matter of design choice to use any header number to indicate characteristics of a the public long code mask since the applicant has not disclosed that a specific header used to indicate a characteristic of the public long code mask solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a header of any chosen value.

Regarding claim 55, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and 3GPP2 further discloses wherein if the flow identifier has a length less than 32 bits, the flow identifier is padded from a most significant bit adjacent the header (3GPP2 - page 2-670, line 6-8; Figure 2.6.13.11-1).

Regarding claim 56, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and 3GPP2 further discloses wherein, if the flow identifier and the header have lengths of 16 bits and 7 bits, respectively, the flow identifier is padded with twelve bits from the most significant bit adjacent the header (3GPP2 - page 2-670, line 6-8; Figure 2.6.13.11-1).

Regarding claim 57, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and 3GPP2 further discloses wherein, if the flow identifier and the header have lengths of 24 bits and 7 bits, respectively, the flow identifier is padded with 4 bits from the most significant bit adjacent the header (3GPP2 - page 2-670, line 6-8; Figure 2.6.13.11-1).

Regarding claim 58, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and



3GPP2 further discloses wherein, if the flow identifier and the header have lengths of 32 bits and 3 bits, respectively, the flow identifier is not padded (3GPP2 - page 2-670, line 6-8; Figure 2.6.13.11-1).

Regarding claim 79, NEEDHAM discloses a mobile terminal (abstract) comprising: a first module configured to receive and store a flow identifier **[talk group identifier]** for a broadcast/multicast service (Figure 6; col. 4, line 44-47; group call request); and a second module configured to generate a public long code mask to be used in a channel for broadcast/multicast service upon providing the broadcast/multicast service, and further configured to use the flow identifier and a predetermined portion of a channel identifier **[Walsh code]** to identify a corresponding forward broadcast supplemental channel among a plurality of forward broadcast supplemental channels (Figures 3 and 4; col. 3, line 55-67; col. 4, line 57-col. 5, line 5; long code mask based on talkgroup identifier used to determine long code and Walsh codes);, wherein the second module allocates a specific header **401** (col. 3, line 64-67), and wherein the second module arranges the channel identifier and the flow identifier from a least significant bit to a most significant bit in a portion of the public long code mask where the specific header is not located (Figure 4; col. 3, line 64-col. 4, line 10; header is located in **401** while channel and flow identifiers are located in **402**). However, NEEDHAM does not expressly disclose wherein allocating a specific header has a value that does not coincide with previous public long code masks and does not coincide with previous long code masks to a most significant bit of the public long code mask. In the same field of endeavor, LALWANEY discloses allocating a specific

header has a value that does not coincide with previous public long code masks and does not coincide with previous long code masks to a most significant bit of the public long code mask (paragraph 43, 44; header includes field for specific mapping to long code masks). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify NEEDHAM to include the teachings of LALWANEY, LALWANEY states that since such a modification would provide specific address mapping to specified multicast groups of specific long code masks. However, the combination of NEEDHAM and LALWANEY does not expressly disclose arranging the channel identifier and the flow identifier from a least significant bit to a more significant bit, respectively. In the same field of endeavor, 3GPP2 teaches arranging the channel identifier and the flow identifier from a least significant bit to a more significant bit, respectively (page 2-669, lines 17-27). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of NEEDHAM and LALWANEY to include the teachings of 3GPP2, since specific allocations of a public long code mask and flow identifier within most significant bits and least significant bits using standardized protocol would allow a system to function within known specifications.

Regarding claim 89, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and 3GPP2 further discloses wherein the specific header has a length of seven bits, corresponding to a value (3GPP2 pages 2-10 – 2-11). Although the combination of NEEDHAM, LALWANEY, and 3GPP2 does not expressly detail selection of a specific

value, it would have been an obvious matter of design choice to use any header number to indicate characteristics of a the public long code mask since the applicant has not disclosed that a specific header used to indicate a characteristic of the public long code mask solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a header of any chosen value.

Regarding claim 90, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. The combination of NEEDHAM, LALWANEY, and 3GPP2 further discloses wherein the specific header has a length of six bits, corresponding to a value (3GPP2 pages 2-10 – 2-11). Although the combination of PANCHAL, JANG, and 3GPP2 does not expressly detail selection of a specific value, it would have been an obvious matter of design choice to use any header number to indicate characteristics of a the public long code mask since the applicant has not disclosed that a specific header used to indicate a characteristic of the public long code mask solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a header of any chosen value.

5. Claim 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over NEEDHAM et al (US 6,188,767) in view of LALWANEY (US 2004/0037237)

Regarding claim 80, NEEDHAM discloses a base station (abstract) comprising: a first module for assigning one forward channel to one broadcast /multicast service, the first module generating a flow identifier of the broadcast/multicast service (Figure 6; col. 4, line 44-47; long code corresponding to group or subscriber ID); and a second module for generating a public long code mask for the assigned forward channel using the

generated flow identifier upon providing the broadcast/multicast service (Figures 3 and 4; col. 3, line 55-67; col. 4, line 57-col. 5, line 5; long code mask based on talkgroup identifier used to determine long code and Walsh codes), wherein the second module allocates a predetermined length of the public long code mask as a specific header having a value (col. 3, line 64-67), and allocates the flow identifier to a predetermined length of lower bits of the public long code mask where the specific header is allocated (However, NEEDHAM does not expressly disclose wherein allocating a specific header has a value that does not coincide with previous public long code masks and does not coincide with previous long code masks to a most significant bit of the public long code mask. In the same field of endeavor, LALWANEY discloses allocating a specific header has a value that does not coincide with previous public long code masks and does not coincide with previous long code masks to a most significant bit of the public long code mask (paragraph 43, 44; header includes field for specific mapping to long code masks). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify NEEDHAM to include the teachings of LALWANEY, LALWANEY states that since such a modification would provide specific address mapping to specified multicast groups of specific long code masks

6. Claims 50, 51, 87, and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over NEEDHAM et al (US 6,188,767) in view of LALWANEY (US 2004/0037237) and in view of 3GPP2 "Upper Layer (Layer 3) Signaling for cdma2000 Spread Spectrum Systems" 3GPP2 C.S0005-d version 1.0 (see IDS submission

04/27/2009, hereinafter 3GPP2) and further in view of BORDER (US 2002/0016851 A1).

Regarding claim 50, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. However, the combination of NEEDHAM, LALWANEY, and 3GPP2 does not expressly disclose wherein a length of the header is variable according to a length of the channel identifier. BORDER discloses wherein a length of a header is variable according to a length of an identifier (abstract; paragraph 141, 144; header is sizable based on payload size). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of NEEDHAM, LALWANEY, and 3GPP2 to include the teachings of BORDER, since such a modification would allow unallocated bits to be used based on a determination of the remaining bits needed.

Regarding claim 51, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. However, the combination of NEEDHAM, LALWANEY, 3GPP2, and BORDER does not expressly disclose wherein, if the predetermined portion of the channel identifier is less than  $n$  bits, where  $n < 7$ , the header has a length of  $10 - n$  bits. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a header based on a variable, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 87, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. However, the combination of NEEDHAM,

LALWANEY, and 3GPP2 does not expressly disclose wherein a length of the header is variable according to a length of the channel identifier. BORDER discloses wherein a length of a header is variable according to a length of an identifier (abstract; paragraph 141, 144; header is sizable based on payload size). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of NEEDHAM, LALWANEY, and 3GPP2 to include the teachings of BORDER, since such a modification would allow unallocated bits to be used based on a determination of the remaining bits needed.

Regarding claim 88, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. However, the combination of NEEDHAM, LALWANEY, 3GPP2, and BORDER does not expressly disclose wherein, if the predetermined portion of the channel identifier is less than  $n$  bits, where  $n < 7$ , the header has a length of  $10-n$  bits. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a header based on a variable, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ARIEL BALAOING whose telephone number is (571)272-7317. The examiner can normally be reached on Monday-Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, V. Paul Harper can be reached on (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ariel Balaoing/  
Examiner, Art Unit 2617

/A. B./  
Examiner, Art Unit 2617